

## Application of David Easton's Model of Political System to the World Wide Web

*Sergey Sergeevich Shirin, Natalia Mikhailovna Bogolubova  
and Julia Vadimovna Nikolaeva*

St. Petersburg State University, St. Petersburg, Russia

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**Abstract:** The article contains a review of the main approaches to the research of the World Wide Web in political science. A place of political studies in the list of curriculum topics for an academic discipline “web science” worked out by an international nongovernmental organization Web Science Trust is estimated. The note is taken that no academic works published by Web Science Trust and its predecessors are devoted to political aspects of the development of the World Wide Web while articles written by political scientists having no deal with Web Science Trust are devoted to the web quite often. The authors initiate the implementation of David Easton's theoretical model of political system to the World Wide Web studies. It can contribute to the promoting social and humanitarian approaches to this research problem which is under the influence of the principle of technological determinism now.

**Key words:** World Wide Web • Web Science • Political System • Web 2.0 • ICANN

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### INTRODUCTION

Social characteristics of the World Wide Web are considered as one of the subjects of an academic discipline called *web science*. This discipline was proposed by the inventor of the World Wide Web Tim Berners-Lee in 2006. The aims of the discipline are as follows: studying the World Wide Web, its social and technological essence; forecasting and regulating the development of the World Wide Web for the sake of society. Nowadays, web science is actively promoted by the international non-profit non-governmental organization Web Science Trust (WST), which unites the representatives of academic and business communities, as well as politicians from all over the world.[1]

Research approach propagandized by WST is interdisciplinary. Scholars from various fields such as natural, social and humanitarian sciences are involved in the research process. WST leaders believe that only such kind of cooperation can result in understanding of the modern web, of the trends of its development and of the benefits to get from it.[2]

High-priority topics for web science were discussed and approved in September 2008 during an international seminar. Actual list of topics is published on the website of WST.[3] The topics are grouped into six major studies: *History of the Web*, *Building the Web*, *The Web in Society*, *Deploying the Web-Operationalising Web Science for a World of International Commerce*, *Analysing the Web*, *Understanding Web Users*. In four of these six areas of study, there are topics which concern political issues. Within the framework of *Building the Web*, there is the *Governance* topic; in *The Web in Society*, there is *Social Capital and Power Inequality*; within *The Web in Society*, *Deploying the Web- Operationalising Web Science for a World of International Commerce*, there is the topic called *Policy* and the topic *Regulation and Security*, and in *Analysing the Web*, there is a topic *Power Laws*. Therefore, political scientists can find a wide field for researches within the framework of web science.

**Literature:** Among all the WST scientific publications, only two are devoted to political themes. They are the report by Eni Mustafaraj and Panagiotis Metaxas *From*

*Obscurity to Prominence in Minutes: Political Speech and Real-Time Search* [4] and the report by Devin Gaffney *#IranElection: quantifying online activism* [5]. But political matters were not the main subject of them. The main subject of the first report is the manipulation of search results, and of the second one-applicability of methods of analysis of new media in social sciences and political science.

If we advert to the main works published by Web Science Trust members beyond the WST over the last years, we can find that special place among these publications should be taken by the book *The Spy in the Coffee Machine: The End of Privacy as We Know It* written by Nigel Shadbolt and Kieron O'Hara [6]. The authors bring up in a provocative form the questions of influence of different information technologies (including web technologies) on the privacy in modern world. They advert to a serious political problem not for solving it but to prove the necessity of web science as a science.

Generally speaking, political scientists' articles are very often devoted to the World Wide Web. Most of the studies of the web conducted by political scientists as well as most of WST publications are based on the principle of technological determinism. The authors consider evolution of the web as a driving force of political processes transformation. [7] Or they simply view web technologies as tools for solving political problems. [8] Political scientists are not interested in the web itself. The researchers don't discover political essence in the World Wide Web. For them, the World Wide Web is an element of the external environment of political system. The web can give momentum to the political system and place limitations on it. The web can be regarded as a reflection of political processes, and the processes themselves progress beyond the web.

Furthermore, in many articles in political science the Web was mentioned only as a social experiment. [9] Besides, there are a lot of works devoted to correlation between the Internet and politics, where the matters of the evolution of World Wide Web are not outlined from the list of common social problems of the Internet as a whole.[10] Political scientists often advert to the interaction between the Internet and politics are not separating the World Wide Web from the Internet as an independent and probably more significant part as the WST suggests. [11]

## RESULT AND DISCUSSION

If we try to summarize the trends of studying the World Wide Web in political science, we will be able to see that, for the overwhelming majority of political scientists (almost for all of them), the World Wide Web is a field of research (the World Wide Web is considered to be an environment where political processes, systems and relations exist), but not as a subject (the topic, of which researchers want to obtain a new knowledge). The World Wide Web is studied as a reflection of political processes going in the real world, or as a driving power of such processes.

Meanwhile, political scientists as well as participants of the web science movement usually forget the fact that modern World Wide Web itself is not only a technological, but also a social system. This characteristic of the World Wide Web is pointed by almost everybody who use the term *Web 2.0* in academic discourse. The World Wide Web is today not just a network of abstract interlinked documents. Modern World Wide Web is the system uniting not only texts, but also (or maybe mainly) personalities (including virtual personalities). Modern World Wide Web is a social system. When we speak today about social networks, we often mean social network services on the Web, not social relations in the real world. Social network is a backbone structure of the network society, the appearance of which Manuel Castells proclaimed 17 years ago. And its most prominent manifestations in the present-day world are observed precisely on the World Wide Web.

If modern World Wide Web is a social system, so, according to the system approach, we can single out a political system within it, as well as within any other social system. Political system of the Web is a system of organisation of political processes and relations, relevant to the society forming on the Web.

If we try to apply David Easton's theoretical model of political system[12] to the World Wide Web, we may discover that World Wide Web suits this model.

Easton regards political system as a mechanism of formation and operation of power in society for allocation of goods and resources.[13] The fundamental value of the modern World Wide Web is not the information (by virtue of its overflow), but the users' attention. Nowadays, users' attention is allocated on the basis of their preferences, there is no regulating power there. However, multiple attempts of service providers to violate the so

called “net neutrality” and to collect additional payment from the major information providers for users’ access to their resources can be considered as an example of regulation-an example of mechanisms of formation and operation of power in society for allocation of goods and resources. Service providers try to become authorities which have such power. At the same time, the information itself (the content) is undoubtedly a resource for forming a virtual society of the World Wide Web. And the attempts of using power for this resource allocation can also be observed today. One of the examples is multiple demands of mass media to the news aggregators to stop putting the mass media news data to the platform of those aggregators, and technical barriers installed by mass media for content syndication. Both the examples are measures taken by the provider of the main resource (the information) for regulation of this resource allocation by means of power, particularly for limitation the resource capability for actors possessing a big amount of the value mentioned above-the users’ attention. We can notice that both service providers and traditional mass media try to regulate information and communication flows on the World Wide Web. They do that in order to prevent absolute hegemony of actors, who now exert the greatest impact on social cooperation on the World Wide Web: search engines, major portals etc. Finally, let’s point out one more example. Domain names are both resource and value on the World Wide Web. They can be compared with such resource and value of real political life as the territory, the living space. Domain names distribution is totally controlled by one organization-ICANN, which undoubtedly is the center of power on the World Wide Web. Some other organizations (such as, for example, World Intellectual Property Organization) try to interfere with the process of dispute resolution of domain names, but their power is negligibly small in comparison with the power of ICANN.

ICANN is often considered as an organization which administers or even governs the whole Internet. Under the agreement with the U.S. Department of Commerce, ICANN was delegated with authority to ensure a smooth operation of the Internet by implementing functions collectively known as the IANA (Internet Assigned Numbers Authority). These functions include coordination of development of technical protocol parameters; managing the root level of the domain name system, distribution of IP addresses’ blocks. The list of IANA functions is not closed. U.S. Department of Commerce may add other functions to this list. [14] ICANN can't perform all the given functions

independently. The history of the bodies coordinating technological development of the Internet shows that this issue is much more effectively performed by the community of developers than by formal specialized organizations. [15] (Even when various standards, developed by such organizations, present a higher quality than the independently proposed specifications, formal organizations still don't possess many chances for their widespread implementation. The most notable example is an e-mail protocol X.400 developed by the International Telecommunication Union. It's well-known that the commonly used protocol SMTP allows to substitute a real address of a sender with a fictional one, and this makes identification of sender impossible. The standard of the International Telecommunication Union is more reliable in this respect, that's why it would allow to solve many of the problems associated with spam-one of the most burning issues of the e-mail evolution. However, the abundance of red tape procedures retarded the publication of X.400 standard. It resulted in the refusal of the community of developers to go on it, as another technology was already well spread in the Internet as a de-facto standard. Because of that, ICANN's role in coordinating the development of technical protocol parameters is rather conventional. Only in matters concerning the “territory” for websites (the top level domain names), ICANN has monopoly. Its “governance” used to be significant in the matters of IP addresses, but nowadays, when all the IPv4 addresses blocks have already been distributed, the potential of ICANN's power is focused on the domain name system which is closely related to URLs-one of the components of World Wide Web technologies.

Further, according to Easton, political system, interacting with the external environment, generates responses on incoming impulses. In this area, Easton defines significantly well the limits of political system using terms “input” and “output”. These terms are applicable to the World Wide Web, too. National power systems and traditional political system of the world community are the major elements of the external environment for political system of the World Wide Web. The actors of the World Wide Web receive impulses from those elements (regarding, for example, copyrights or personal data protection), and the responses are generated inside the political system of the World Wide Web. For example, we can see legal actions and litigations as an input, and, as an output, there will be either content providers’ agreements with copyright owners (as in case of Google Books), or enforcement of technical measures

of privacy control for making more complicated the univocal correspondence of virtual personalities acting on the World Wide Web with real people acting in physical space (in case with hackers and spammers, or sellers of the information about owners of bank cards and accounts), or a shift of physical location of a web object to the territories with different political systems while the address of the object on the World Wide Web remains the same (as in case with Chechen separatists' website *Kavkaz Center*, the access to which is periodically hindered by Russian special services, but some time after, the website always starts working from the different physical location but at the same address).

If we advert to the other meaning of Easton's terms "input" and "output", we may notice that this meaning is also applicable to the World Wide Web. As it is generally known, Easton outlined two major elements of input: demands and support. Demands mean any appeal to the power structures concerning allocation of values in society. Easton marked out three general types of demands: distributive, regulating and communicative. He regarded support as a loyal attitude of society to a political system. Support secures the stability of a political system. [16] For common users, the power authority on the World Wide Web is neither internet service provider, nor content creator, nor even almighty ICANN, but the owner of the website on which users spend most of their time on the Web. This might be Facebook, Google, Wikipedia or something else. By using the services of major websites, the users accept the terms and conditions settled by this website owner, and "live" in the website space obeying these rules. In addition, the users can make a suggestion on website operation improvement ("demands"), they can stay on the website or quit after another change ("support"). Thus, major websites resemble quasi-governments, and their users resemble their "nationals" or even "citizens". There is the only difference: every virtual personality can be a "national" of several "governments" simultaneously, including rival websites.

## CONCLUSION

Thus, the term of political system can be applicable to a number of processes and relations, appearing in the virtual society of the World Wide Web. But this society is not just an element of the external environment of global political system (as it is assumed by many

researchers of new media, social media, social networking services, blogging etc.). Vice-versa, the virtual society of the World Wide Web is a political system itself; and, for this political system, our traditional political system, probably, is not more than an external environment existing in another kind of "space".

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